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PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)

SUBMITTED BY:

Department	Biology and Wildlife	College/School	CNSM
Prepared by	Mark Lindberg	Phone	474-6598
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See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

DEGREE PROGRAM	Wildlife Biology and Conservation	
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	B.S.	

A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)

To reduce credits requirements for degree from 130 to 120 while still meeting certification requirements for The Wildlife Society. To accomplish this we are proposing to remove some courses while accepting a more diverse suite of courses for other requirements. This will reduce the average time required to complete a degree by requiring fewer courses and reducing scheduling conflicts and therefore may also increase graduation rates without compromising quality of the program.

B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:

Wildlife Biology and Conservation
 College of Natural Science and Mathematics
 Department of Biology and Wildlife
 907-474-7671
www.bw.uaf.edu

B.S., M.S. Degrees; Minor

Downloadable PDF

Minimum Requirements for Degree: 130 credits

The undergraduate wildlife program provides basic education and training. This degree is designed for students whose objective is to accomplish the research needed to provide additional information on wild animal populations, their habitat and habitat-animal relationships. This degree is also for students whose primary interests involve interpreting, applying or disseminating research findings, rather than their acquisition. A wildlife B.S. degree is appropriate for students contemplating careers in wildlife agency administration, in developing and implementing wildlife management plans and in public information and education. The curriculum provides a solid foundation for graduate study and meets

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Dean's Office
 College of Natural Science & Mathematics

requirement for certification by The Wildlife Society.

The geographic location of the university is particularly advantageous for the study of wildlife biology. Spruce forest, aspen-birch forest, alpine tundra, bogs and several types of aquatic habitats are within easy reach. Studies can be made in many other habitats ranging from the dense forests of southeastern Alaska to arctic tundra.

Adequate study collections of plants and animals are available, and a 2,000-acre study area is near the campus. Wildlife biology students have ample opportunity for close association with the personnel of the Alaska Cooperative Fish and Wildlife Research Unit, Institute of Arctic Biology and several local offices of the federal and state conservation agencies. These agencies often provide support for graduate student projects, and program faculty usually hire a number of students for summer fieldwork. Thus, an unusually good opportunity is available for students to gain experience and to make job connections.

Major -- B.S. Degree

1. Complete the general university requirements. (As part of the core curriculum requirements, complete COMM F141X.)
2. Complete the B.S. degree requirements.
3. Complete the following program (major) requirements:*
 1. Complete the following:
 - BIOL F115X--Fundamentals of Biology I***--4 credits
 - BIOL F116X--Fundamentals of Biology II***--4 credits
 - BIOL F239--Introduction to Plant Biology--4 credits
 - BIOL F271--Principles of Ecology--4 credits
 - BIOL F310--Animal Physiology--4 credits
 - BIOL F317--Comparative Anatomy of Vertebrates--4 credits
 - BIOL F331--Systematic Botany--4 credits
 - BIOL F362--Principles of Genetics--4 credits
 - BIOL F425--Mammalogy--3 credits
 - BIOL F426W,O/2--Ornithology--3 credits
 - ENGL F314W,O/2--Technical Writing (3)
 - or ENGL F414W--Research Writing (3)--3 credits
 - NRM F101--Natural Resources Conservation and Policy--3 credits
 - NRM F204--Public Lands Law and Policy (3)
 - or NRM F407--Environmental Law (3)--3 credits
 - WLF F101--Survey of Wildlife Science--1 credit
 - WLF F201--Wildlife Management Principles--3 credits
 - WLF F303W--Wildlife Management Techniques--3 credits
 - WLF F410--Wildlife Populations and Their Management--3 credits
 - WLF F460--Wildlife Nutrition--4 credits
 2. Complete at least one of the following:
 - BIOL F471--Population Ecology--3 credits
 - WLF F433--Conservation Genetics--3 credits
 - WLF F469O--Landscape Ecology and Wildlife Habitat--3 credits
 3. Complete the following:
 - CHEM F105X--General Chemistry**--4 credits
 - CHEM F106X--General Chemistry**--4 credits
 - MATH F200X--Calculus (4)**
 - or MATH F272X--Calculus for Life Sciences (3)**--3 - 4 credits
 - PHYS F103X--College Physics--4 credits

STAT F200X--Elementary Probability and Statistics (3)***

or STAT F300--Statistics (3)***--3 credits

STAT F401--Regression and Analysis of Variance***--4 credits

4. Complete three of the following:

BIOL F303--Principles of Metabolism and Biochemistry--4 credits

BIOL F406--Entomology--4 credits

BIOL F427--Ichthyology--3 credits

BIOL F441W,O/2--Animal Behavior--3 credits

BIOL F472W--Community Ecology--3 credits

BIOL F473W--Limnology--4 credits

BIOL F474--Plant Ecology--4 credits

BIOL F481--Principles of Evolution--3 credits

NRM F312--Introduction to Range Management--3 credits

NRM F338--Introduction to Geographic Information Systems--3 credits

NRM F435--GIS Analysis--4 credits

NRM F370--Introduction to Watershed Management--3 credits

NRM F380W--Soils and the Environment--3 credits

NRM F450--Forest Management--3 credits

WLF F305--Wildlife Diseases--3 credits

WLF F419O/2--Waterfowl and Wetlands Ecology and Management--4 credits

4. Complete electives

5. Minimum credits required--130 credits

* Students must earn a C grade (2.0) or better in each course.

** Satisfies a core requirement.

*** Satisfies a B.S. degree requirement.

Note: B.S. degree candidates are strongly urged to obtain work experience in wildlife-related positions with public resource agencies or private firms. Faculty members can help students contact potential employers.

Requirements for biology teachers (grades 7 - 12):*

1. Complete all the requirements of the wildlife biology B.S. degree.

2. All prospective biology teachers must complete the following:

BIOL F342--Microbiology--4 credits

BIOL F481--Principles of Evolution--4 credits

BIOL F303--Principles of Metabolism and Biochemistry (4) or CHEM F321 and

CHEM F322--Organic Chemistry (6)--4 - 6 credits

3. All prospective science teachers must complete the following:

PHIL F481--Philosophy of Science (3)--3 credits

* We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later, for licensure

in biology.

Minor*

1. Complete the following:
 - WLF F303W--Wildlife Management Techniques--3 credits
 - WLF F410--Wildlife Populations and Their Management--3 credits
 - WLF F460--Wildlife Nutrition--4 credits
 - Approved BIOL and WLF electives*--6 credits
2. Minimum credits required--15 credits

* Only biology or wildlife electives that are not required for the student's major.

Note: Prerequisites for required courses include BIOL F115X-F116X, BIOL F271, BIOL F310, STAT F200X or F300, and WLF F201. Depending upon a student's major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.

**C. PROPOSED REQUIREMENTS AS IT WILL APPEAR IN THE CATALOG WITH THESE CHANGES:
(Underline new wording ~~strike through old wording~~ and use complete catalog format)**

Wildlife Biology and Conservation

College of Natural Science and Mathematics
Department of Biology and Wildlife
907-474-7671
www.bw.uaf.edu

B.S., M.S. Degrees; Minor

Downloadable PDF

Minimum Requirements for Degree: 1230 credits

The undergraduate wildlife program provides basic education and training. This degree is designed for students whose objective is to accomplish the research needed to provide additional information on wild animal populations, their habitat and habitat-animal relationships. This degree is also for students whose primary interests involve interpreting, applying or disseminating research findings, rather than their acquisition. A wildlife B.S. degree is appropriate for students contemplating careers in wildlife agency administration, in developing and implementing wildlife management plans and in public information and education. The curriculum provides a solid foundation for graduate study and meets

requirement for certification by The Wildlife Society.

The geographic location of the university is particularly advantageous for the study of wildlife biology. Spruce forest, aspen-birch forest, alpine tundra, bogs and several types of aquatic habitats are within easy reach. Studies can be made in many other habitats ranging from the dense forests of southeastern Alaska to arctic tundra.

Adequate study collections of plants and animals are available, and a 2,000-acre study area is near the campus. Wildlife biology students have ample opportunity for close association with the personnel of the Alaska Cooperative Fish and Wildlife Research Unit, Institute of Arctic Biology and several local offices of the federal and state conservation agencies. These agencies often provide support for graduate student projects, and program faculty usually hire a number of students for summer fieldwork. Thus, an unusually good opportunity is available for students to gain experience and to make job connections.

Major -- B.S. Degree

1. Complete the general university requirements. (As part of the core curriculum requirements, complete COMM F141X.)
2. Complete the B.S. degree requirements.
3. Complete the following program (major) requirements:*

1. Complete the following:

BIOL F115X--Fundamentals of Biology I***--4 credits

BIOL F116X--Fundamentals of Biology II***--4 credits

BIOL F239--Introduction to Plant Biology--4 credits

BIOL F271--Principles of Ecology--4 credits

BIOL F310--Animal Physiology--4 credits

BIOL F317--Comparative Anatomy of Vertebrates--4 credits

BIOL F331--Systematic Botany--4 credits

or BIOL F461 Arctic Plants and Vegetation Ecology - Lecture--2

BIOL F362--Principles of Genetics--4 credits

~~BIOL F425--Mammalogy--3 credits~~

~~BIOL F426W,O/2--Ornithology--3 credits~~

ENGL F314W,O/2--Technical Writing--3 credits

or ENGL F414W--Research Writing--3 credits

~~NRM F101--Natural Resources Conservation and Policy--3 credits~~

~~NRM F204--Public Lands Law and Policy (3)~~

~~or NRM F407--Environmental Law (3)--3 credits~~

WLF F101--Survey of Wildlife Science--1.5 credit

~~WLF F222~~ ~~WLF F201~~ WLF F322W--Wildlife Management Principles and Techniques of Wildlife Management--3 credits

~~WLF F30301W--Wildlife Management Techniques-Design of Wildlife Studies--3 credits~~

WLF F410--Wildlife Populations and Their Management--3 credits

WLF F460O/2--Wildlife Nutrition--4 credits

2. Complete at least one of the following:

BIOL F471--Population Ecology--3 credits

WLF F433--Conservation Genetics--3 credits

WLF F469O--Landscape Ecology and Wildlife Habitat--3 credits

***** Satisfies a B.S. degree requirement.**

Note: B.S. degree candidates are strongly urged to obtain work experience in wildlife-related positions with public resource agencies or private firms. Faculty members can help students contact potential employers.

Requirements for biology teachers (grades 7 - 12):*

- 1. Complete all the requirements of the wildlife biology B.S. degree.**
- 2. All prospective biology teachers must complete the following:**
 - BIOL F342--Microbiology--4 credits**
 - BIOL F481--Principles of Evolution--4 credits**
 - BIOL F303--Principles of Metabolism and Biochemistry (4) or CHEM F321 and CHEM F322--Organic Chemistry (6)--4 - 6 credits**
- 3. All prospective science teachers must complete the following:**
 - PHIL F481--Philosophy of Science (3)--3 credits**

*** We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year. Above requirements apply to all candidates who apply to the UAF School of Education Spring 2006 or later, for licensure in biology.**

Minor*

- 1. Complete the following:**
 - WLF F3031W--~~Wildlife Management Techniques~~ Design of Wildlife Studies--3 credits**
 - WLF F410--Wildlife Populations and Their Management--3 credits**
 - WLF F460--Wildlife Nutrition--4 credits**
 - Approved BIOL and WLF electives*--6 credits**
- 2. Minimum credits required--15 credits**

*** Only biology or wildlife electives that are not required for the student's major.**

Note: Prerequisites for required courses include BIOL F115X-F116X, BIOL F271, BIOL F310, STAT F200X or F300, and WLF F22204. Depending upon a student's major, some of these prerequisites may satisfy the 6 elective credits in biology and wildlife required for this minor.

D. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

None that we are aware. Faculty within the wildlife program are prepared to cover courses with a new hire arriving in Spring 2012. There are no new courses expected for faculty in other programs.

E. IMPACTS ON PROGRAMS/DEPTS:

*What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)*

We are unsure how many students will elect to enroll in alternative course for some of the requirements (e.g., 2 additional courses besides PHYS103). However, we anticipate this will result in fewer than 10 total students leaving or enrolling in different classes than prior to these changes. We have eliminated NRM 101 as a required class because we can meet certification requirements without this class and we expect that few students will elect to take this class since we offer and require a similar, major specific class (WLF 101).

F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:

Description of the student learning outcomes assessment process.)

JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campuswide curriculum committees is to scrutinize program/degree change applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be selfexplanatory. If you drop a course, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the program is not compromised as a result.

Again, the main purpose of this change is reduce time to complete the degree and we anticipate this may also increase graduation rates. We are mostly trying to accomplish these objectives by offering more diversity in courses needed to meet major requirements and avoiding scheduling conflicts and giving students more flexibility. We were able to reduce credit requirements by eliminating one class (NRM 101 – explanation above) and requiring fewer elective (changes which were actually implemented last year). Students may still elect to take more than 120 credits, but these relatively minor changes will allow them to complete the degree with 120 credits without any specific reduction in the quality of the program. Students completing 120 credits will still meet the educational requirements for certification as a professional wildlife biologist by The Wildlife Society.

WLF F305—Wildlife Diseases—3 credits

3. Complete the following:
 - CHEM F105X--General Chemistry**--4 credits
 - CHEM F106X--General Chemistry**--4 credits
 - MATH F200X—Calculus**--3 credits
or MATH F272X--Calculus for Life Sciences--4 credits**
 - PHYS F103X--College Physics--4 credits or GEOS 101X—The Dynamics of Earth—4 credits or NRM F380W--Soils and the Environment--3 credits
 - STAT F200X--Elementary Probability and Statistics***--3 credits
or STAT F300—Statistic***--3 credits
 - STAT F401--Regression and Analysis of Variance***--4 credits
4. Complete at least one of the following from each pair:
 - WLF F420O--Ecology and Management of Birds--3 credits or BIOL F426W, O/2--Ornithology--3 credits
 - WLF F421--Ecology and Management of Large Mammals--3 credits or BIOL F425--Mammalogy—3 credits
5. Complete ~~three~~ two of the following:
 - NRM F204—Public Lands Law & Policy—3 credits
 - ECON F235—Introduction to Natural Resource Economics—3 credits
 - NRM F407—Environmental Law—3 credits
 - HIST F411—Environmental History—3 credits
 - PS F447—Environmental Politics—3 credits
 - ~~BIOL F303—Principles of Metabolism and Biochemistry—4 credits~~
 - ~~BIOL F406—Entomology—4 credits~~
 - ~~BIOL F427—Ichthyology—3 credits~~
 - ~~BIOL F441W,O/2—Animal Behavior—3 credits~~
 - ~~BIOL F472W—Community Ecology—3 credits~~
 - ~~BIOL F473W—Limnology—4 credits~~
 - ~~BIOL F474—Plant Ecology—4 credits~~
 - ~~BIOL F481—Principles of Evolution—3 credits~~
 - ~~NRM F312—Introduction to Range Management—3 credits~~
 - ~~NRM F338—Introduction to Geographic Information Systems—3 credits~~
 - ~~NRM F435—GIS Analysis—4 credits~~
 - ~~NRM F370—Introduction to Watershed Management—3 credits~~
 - ~~NRM F380W—Soils and the Environment—3 credits~~
 - ~~NRM F450—Forest Management—3 credits~~
 - ~~WLF F305—Wildlife Diseases—3 credits~~
 - ~~WLF F419O/2—Waterfowl and Wetlands Ecology and Management—4 credits~~

6. Complete electives at least one additional course at the 300 level or higher (3 or 4 credits) in Biology, Wildlife Biology, Fisheries, Marine Science or Natural Resources Management*

4. Minimum credits required--1320 credits

* Students must earn a C grade (2.0) or better in each course.

** Satisfies a core requirement.

APPROVALS:

<input type="text"/>	Date	<input type="text"/>
Signature, Chair, Program/Department of: <input type="text"/>		

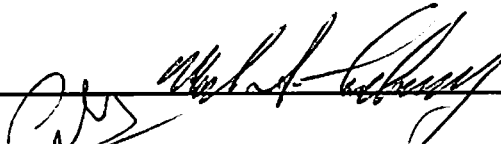
<input type="text"/>	Date	<input type="text"/>
Signature, Chair, College/School Curriculum Council for: <input type="text"/>		


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Signature, Dean, College/School of: <input type="text"/>		

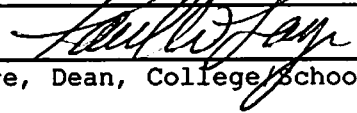
ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

<input type="text"/>	Date	<input type="text"/>
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		

APPROVALS:


 Date 19 Sep. 2011
Sept 16, 2011
 Signature, Chair,
 Program/Department of: Biology and Wildlife


 Date 10/5/11
 Signature, Chair, College/School
 Curriculum Council for: CNSM


 Date Oct 5, 2011
 Signature, Dean, College/School
 of: CNSM

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

Signature, Chair, UAF Faculty Senate Curriculum
 Review Committee

Date